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EXAMINER

COONEY, JOHN M

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4-7-09 has been entered.

Claim Objections

Claim 8 is objected to because of the following informalities: The specifications for performing the DIN 4102 foreign test standard needs to be provided for the record. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 8 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession

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of the claimed invention. DIN 4102 relates to foreign test standards and applicants' supporting disclosure lacks adequate written description of the conditions under which the test are performed. The specifications for performing the DIN 4102 foreign test standards need to be provided for the record. Appropriate correction is required.

Claims 7-8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicants' recited trimerization catalyst and carboxylic acid content adjustment limitation as now claimed is not described by the originally filed supporting disclosure in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a new matter rejection.

Claim 8 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicants' recited conversion degree measurement limitation

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as now claimed is not described by the originally filed supporting disclosure in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a new matter rejection.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim is confusing as to intent in that it is not seen how the test operation performed upon the foams of applicants' invention from the exemplified embodiments of applicants' supporting disclosure, which arguably constitutes a destruction of the foam formed in the processes of the disclosure, constitutes a further process step in the process of preparing a foam set forth in the claim from which it depends.

Claim 31 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 31 recites the limitation "the water" in the 1st line. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12, 18, 19, 22-24, 26, 28, 30, 31 and 33-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bodnar et al.(5,143,945) in view of Scherbel et al.(5,688,835) and further in view of Fishback et al.(5,523,333).

Bodnar et al. discloses preparations of polyisocyanurate based foams prepared by reacting isocyanates and isocyanate reactive materials, including polyester polyols in elevated amounts as claimed, at isocyanate indexes as claimed in the presence of blowing agents reading on those claimed, alkali metal salt trimerization catalysts in amounts as claimed, and functionalized and non-functionalized carboxylic acids, wherein the disclosed preparations read on the methods and products of applicants' claims (see examples, as well as, the entire document).

The pKa in water values are values associated with the selection of carboxylic acid and are held to be inherent features of the teachings of Bodnar et al.

Bodnar et al. differs from applicants' claims as to the specific amounts and selection of catalysts for the function of trimerization and urethanization. However, Bodnar et al. discloses selection of catalysts in overlap with those of applicants' claims and disclosure for the purpose of imparting their catalyzing effect, including the role of trimerization and urethanization catalysis and the dual role of both (see column 8 line 32-column 9 line 45). Accordingly, it would have been obvious for one having ordinary skill in the art to have employed catalysts within the teachings of Bodnar et al. for the purpose of controlling trimerization and urethanization effects during product formation in order to arrive at the products and processes of applicants' claims with the expectation of success in the absence of a showing of new or unexpected results. Further, though selection of amounts are not exact between Bodnar et al. and applicants' claims, it has long been held that where the general conditions of the claims are disclosed in the prior art, discovering the optimal or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233; *In re Reese* 129 USPQ 402 . Further, a prima facie case of obviousness has been held to exist where the proportions of a reference are close enough to those of the claims to lead to an expectation of similar properties. *Titanium Metals v Banner* 227 USPQ 773. **(see also MPEP 2144.05 I)** Similarly, it has been held that discovering the optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272,205 USPQ 215 (CCPA 1980).

Bodnar et al. differs from claim 31 {assuming resolution of 35 USC 112 issue} in that water is not particularly required. However, Bodnar et al. is clear as to employment

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of water being a preferred embodiment of their invention for the purposes of imparting the foaming effect. Accordingly, it would have been obvious for one having ordinary skill in the art to have employed water as the blowing agent of Bodnar et al. for the purpose of imparting the foaming effect in order to arrive at the products and processes of applicants' claims with the expectation of success in the absence of a showing of new or unexpected results.

Applicants' claims differ from Bodnar et al. in that hydrocarbons are not particularly employed. However, Scherbel et al. discloses hydrocarbons to be replacement blowing agents for halofluorocarbons in rigid foam applications (see column 1 lines 40-65). Accordingly, it would have been obvious for one having ordinary skill in the art to have replaced the halocarbons of Bodnar et al. with the hydrocarbons of Scherbel et al. for the purpose of imparting the foaming effect with environmentally advantageous results in order to arrive at the products and processes of applicants' claims with the expectation of success in the absence of a showing of new or unexpected results. In addition to Scherbel et al.'s disclosure of specific selections of hydrocarbons falling within the group of compounds identified by applicants' claims, it is held that the selection of C4-C8 hydrocarbons are of the most readily envisioned selections of hydrocarbons from Scherbel et al.'s generic disclosure, and distinction based on this further aspect of applicants' claims.

Claims 5, 6, 11, 12, 30, 34-36 of applicants' invention differ from Bodnar et al. in that they require acids having non-oxygen based additional functionality. However, Fishback et al. discloses amine group containing carboxylic acids, such as anthranilic

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acid, to be acceptable functionally equivalent carboxylic acid blowing agents in making rigid foams (see column 5 lines 1-30, as well as, the entire document). Accordingly, it would have been obvious for one having ordinary skill in the art to have employed the carboxylic acids of Fishback et al., including anthranilic acid, as the carboxylic acids used in the preparations of Bodnar et al. for the purpose of imparting the foaming effect in order to arrive at the products and processes of applicants' claims with the expectation of success in the absence of a showing of new or unexpected results. It is prima facie obvious to substitute equivalents, motivated by the reasonable expectation that the respective species will behave in a comparable manner or give comparable results in comparable circumstances. *In re Ruff* 118 USPQ 343; *In re Jezel* 158 USPQ 99; the express suggestion to substitute one equivalent for another need not be present to render the substitution obvious. *In re Font*, 213 USPQ 532.

The teachings and fair suggestion of Bodnar et al. address variations in amounts of trimerization catalyst and/or carboxylic acid such that distinction based on the recitations of claim 7 is not evident. As to claim 8, it is held that performance of a known test on any foam for the purpose of observing its behavior in that test is an operation well within the skill of the ordinary practitioner in the art given that such is the purpose and design of the test in the first place.

Applicant's latest arguments have been considered. However, rejection is maintained.

As to applicants' arguments directed towards the deficiencies of the combined teaching, it is held that the claims as the currently stand would be properly arrived at from the teachings and fair suggestions of the cited prior art. One more concerned with environmental concerns rather than price, insulation, and compatibility would look to the substitution of alkanes of Scherbel et al. for the haloalkanes of Bodnar et al. with the expectation of success in the absence of a showing of new or unexpected results attributed to differences in applicants' claims that are commensurate in scope with the claims as they currently stand. At this time, no sufficient showing of new or unexpected results has been made.

Applicants' arguments as to Fishback et al. are unpersuasive. Though Bodnar et al. discloses employment of such acids to be less than preferred at column 3 line 60 – column 4 line 28, it has long been held that all disclosures of the prior art, including unpreferred or auxiliary embodiments, must be considered in determining obviousness. In re Mills, 176 USPQ; In re Lamberti, 192 USPQ 278; In re Boe, 148 USPQ 507. Further, Fishback et al. identifies the acceptable function of its identified blowing agents of applicants' claims for purposes of producing acceptably foamed products. Accordingly, it is maintained that the position of obviousness is proper and supported by the combined teaching of the above cited prior art. Moreover, it is noted that not all of applicants' claims require the use of carboxylic acids having the additional functional compounds defined by applicants' claims 5, 6, 11, 12, 30, 34-36.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Cooney whose telephone number is 571-272-1070. The examiner can normally be reached on M-F from 9 to 6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck, can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/John Cooney/

Primary Examiner, Art Unit 1796